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Program Aid No. 367

U. S. DEPARTMENT OF AGRICULTURE

ERADICATING



THE SCREWWORM

The screwworm causes livestock losses of over \$20 million a year in Florida and nearby States—Georgia, Alabama, Mississippi, and South Carolina. It can be eradicated.

Eradication work is based on two recent discoveries: Female screwworm flies mate only once; and exposing laboratory-raised screwworms in the pupal or resting stage to radiation from cobalt-60, a radioactive material, causes the adult flies to be sterile. When sterile males greatly outnumber the wild male flies, eggs from most female flies do not hatch.

The State of Florida and the U. S. Department of Agriculture in cooperation with other Southeastern States are putting these discoveries to work. You can help.

- Check your livestock carefully and often; treat infested animals.
- Promptly report all suspected cases to your county agricultural agent or your local screwworm inspector.
- Cooperate in the eradication effort by not moving screwworm-infested livestock.

THE PLAN

The plan is to overwhelm the wild screwworm population with sterile male flies until the last female produces sterile eggs.

Eradication of screwworms on the Caribbean island of Curacao and the results of pilot tests in Florida have given assurance that this method of attacking the screwworm will eradicate the pest in Southeastern States.

Flies released in this eradication program are harmless. They are not radioactive. They do not bite and are not household or picnic pests.

ERADICATING THE SCREWWORM



With your help, screwworms can be eradicated from these ranges.

N-22021

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HOW YOU CAN HELP

Screwworms cause suffering and death to cattle, sheep, hogs, and deer and other wildlife. You can help eradicate screwworms. Good management of your livestock will keep infestations at a minimum.

Prompt treatment of infested wounds will kill the maggots before they develop into flies. The fewer wild screwworms there are, the more quickly the sterile flies released in this program can control and eradicate them.



N-22044

Untreated screwworm infestation can kill in 10 days.

Here is a list of practices that are good any time, but are especially important now in screwworm eradication.

- Carefully examine your livestock for wounds at least twice a week. Any open wound is susceptible to attack. An injury may be as small as a tiny cut, scratch, or tick bite. Find every animal; examine it carefully; treat every wound or infestation promptly. Infested animals often stray away from the herd—to avoid further attack, they seek shelter in dense brush.



N-25647

Treat wounds promptly.

- Use EQ-335 or Smear 62 on infestations and as a wound dressing. Follow instructions on the label. Repeat treatments at least twice a week until the wounds are healed. Keep infested animals where they are easy to inspect and treat.
- Telephone your county agricultural agent or your local screwworm inspector promptly about any screwworm case you suspect in livestock, pets, or wildlife. Make a record of the infestation and save samples of the eggs and maggots from the wounds. Keep the maggots in a bottle or other small container filled with water and keep the eggs dry, in a pillbox or similar container, until the screwworm inspector calls for them.
- Carefully examine animals being loaded or unloaded at your ranch and treat all wounds. You and your neighbors will have fewer screwworms if you make sure that the animals you buy are free from screwworms when they are loaded at point of origin.
- Manage your livestock so as to avoid injuries. Schedule breeding so that birth of animals will take place during cool weather when screwworms are least active. Treat the navels of newborn animals and repeat treatment as needed until healed. Nip off the needle teeth of baby pigs.

Use bloodless emasculators to castrate cattle, sheep, and goats. Treat other surgical operations with screwworm remedies. Closely watch all wounds until healed.

Treat wounds made by branding, earmarking, eartagging, and dehorning. During screwworm season, tip the sharp horns of cattle.

Keep fences, pens, and chutes in good repair to prevent injuries from protruding snags, nails, wire, and splinters.

Control ticks and insects by spraying the animals with recommended insecticides.

Do not use catch dogs on livestock.

Encourage your neighbors to use these precautions. You will have fewer screwworms on your ranch if you and your neighbors cooperate.

THE SCREWWORM

The screwworm, the maggot of a fly, is a true parasite that feeds only on the live flesh of warm-blooded animals.

Although screwworm cases cannot always be verified without correct identification of maggots taken from the wound, most livestock producers are familiar with the symptoms and usually can recognize an infestation.



The plan . . . overwhelm the wild screwworm population . . . until the last female produces sterile eggs.

The female fly lays about 250 eggs to the cluster on a wound. The egg cluster is about the size of the end of a cigarette. When females are numerous, they lay egg clusters overlapping each other. Freshly laid egg clusters are white, but they change to a dull gray after about 12 hours.



BN-4375

The fly lays about 250 eggs in a cluster on the wound.

The tiny, newly hatched maggots burrow into the flesh of the animal and begin feeding. Wounds infested with screwworms have a distinctive, foul odor. A characteristic bloody or brownish discharge drains from the wound and stains the hair below. Feeding maggots usually are covered by this fluid. The maggots feed in closely packed groups, continually rasping away at living flesh.

Screwworms feeding in a wound gouge out a deep pocket—often the maggots feed so deeply that they cannot easily be recognized, but close observation will reveal the rear ends of the maggots projecting just above the surface of the bloody discharge. An infested wound attracts other screwworm flies; consequently, thousands of maggots may be at work within a few days in a single wound.



BN-1416

Thousands of maggots may work in a single wound.

Screwworm maggots normally mature in 5 or 6 days, then fall to the ground to pupate and develop into flies.

An infestation can kill an untreated, full-grown animal in 10 days or less, depending on the location of the wound.

Prepared by Animal Disease Eradication Division and Entomology Research Division, Agricultural Research Service.

